

### **Amendments to the Specification:**

Pursuant to 37 C.F.R. § 1.121(b) kindly amend the specification as follows. Amendments to the specification are made by presenting replacement paragraphs or sections marked up to show changes made relative to the immediate prior version. The changes in any amended paragraph or section are being shown by strikethrough (for deleted matter) or underlined (for added matter).

Please amend the title as follows,

~~CAM TORQUE ACTUATED (CTA) VARIABLE CAM TIMING (VCT) SYSTEM~~  
HAVING MODIFICATIONS TO INCREASE CAM TORSIONALS FOR ENGINES (E.G. 4-  
~~CYLINDER)~~ HAVING LIMITED INHERENT TORSIONALS.

On page 1, line 1, insert the following paragraph,

#### **REFERENCE TO PROVISIONAL APPLICATION**

This application claims an invention which was disclosed in Provisional Application Number 60/443,060, filed 01/28/2003, entitled "-CAM TORQUE ACTUATED (CTA) VARIABLE CAM TIMING (VCT) SYSTEM HAVING MIDIFICATIONS TO INCREASE CAM TORSIONALS FOR ENGINES (E.G. 4-CYLINDER) HAVING LIMITED INHERENT TORSIONALS". The benefit under 35 USC §119(e) of the United States provisional application is hereby claimed, and the aforementioned application is hereby incorporated herein by reference.

On page 14, 3<sup>rd</sup> paragraph, change as follows,

Chamber is defined as a space within which vane rotates. ~~Camber~~ Chamber may be divided into advance chamber (makes valves open sooner relative to crankshaft) and retard chamber (makes valves open later relative to crankshaft). Check valve is defined as a valve which permits fluid flow in only one direction. A closed loop is defined as a control system which changes one characteristic in response to another, then checks to see if the change was made correctly and adjusts the action to achieve the desired result (e.g. moves a valve to change phaser position in response to a command from the ECU, then checks the actual phaser position

and moves valve again to correct position). Control valve is a valve which controls flow of fluid to phaser. The control valve may exist within the phaser in CTA system. Control valve may be actuated by oil pressure or solenoid. Crankshaft takes power from pistons and drives transmission and camshaft. Spool valve is defined as the control valve of spool type. Typically the spool rides in bore, connects one passage to another. Most often the spool is most often located on center axis of rotor of a phaser.

On page 19, change the ABSTRACT OF THE DISCLOSURE as follows,

In a ~~cam-torque-actuated (CTA)~~ variable cam timing (VCT) system that has a crank shaft coupled to at least one cam shaft. The system has at least one timing gear associated with the crank shaft or a cam shaft. The timing gear includes at least two groups of toothlike projections including a first group having a first distance to the center of the wheel, and a second group having a second distance to the center of the wheel. The first distance is different from the second distance. Whereby torsional energy for torque actuated purposes is increased for the ~~CTA~~ VCT system. The system may further include a resonator which is positioned upon the at least one cam shaft, the resonator including at least one mass and at least one elastic element. Whereby torsional oscillation of the at least one cam shaft at a predetermined engine speed range is increased.